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COMMUNICATION CIRCUITS

MONDAYS **25 LECTURES**

The course will be based on the modern approach to synthesis of passive networks through pole-zero methods, involving the complex frequency concept and Laplace transformations. The main topics to be studied may be briefly summarized as follows:

1. A study of the properties of driving point and transfer impedances and the conditions of physical realizability.
2. Methods of synthesis of driving point impedances of one terminal-pair networks, including transformerless techniques.
3. Design of two terminal-pair networks for specified driving point and transfer impedances and some conventional transfer function synthesis.
4. An investigation of the approximation problem which is the practical problem in network design. This will include the use of Butterworth and Tschebyscheff functions, frequency transformations, design for equiripple characteristics, etc.

It should be noted that the above outline is very general in nature and the content of the course may be altered to suit the demands of the candidates.

Lecturer: J. A. Brzozowski, B.A.Sc.

Time: Mondays at 7:30, beginning October 6th.

Place: Room E 21 Electrical Building

Fee: $50.00

UNIVERSITY OF TORONTO
UNIVERSITY EXTENSION

Session 1958-59

Courses in

ENGINEERING

FEEDBACK CONTROL SYSTEMS
ELECTRIC POWER SYSTEMS
COMMUNICATION CIRCUITS

ENGINEERING COURSES

The following courses will be offered this year for the first time through the Department of University Extension, in co-operation with the Department of Electrical Engineering, Professor C. F. Tracy, Head. The courses will be similar to those given to graduate students, hence a Bachelor's degree in engineering (Electrical) from a recognized university, or its equivalent, will be required.

The content of the courses and the instructors have been chosen in collaboration with staff members of the respective departments, and these staff members will act as consultants.

All these classes are limited to 35 students. They are non-credit courses. Each course will consist of 25 lectures.

Registration:

By mail or in person at Room 207, 65 St. George Street, 9 a.m. to 5 p.m. daily except Saturdays. Application forms and course literature may be obtained by writing The Director, University Extension, 65 St. George Street, or by telephoning WA. 3-6611, Locals 301, 304, 526, 527.

In order to accommodate students and enable them to enrol during the evening, registration will be taken—

Tuesday	September 16th
Thursday	September 18th
Monday	September 22nd
Wednesday	September 24th
Wednesday	October 1st

in the evenings from 7:30 to 9:00, in the Wallberg Building, corner St. George and College Streets.

FEEDBACK CONTROL SYSTEMS

MONDAYS 25 LECTURES

A study of the analysis and synthesis of linear feedback control systems by means of differential equations and the Laplace transformation. Topics covered include methods of compensation, stability, root-locus methods, systems with time delays, and A.C. control systems. An introductory study of non-linear systems is also made including the use of describing function and phase-plane methods of analysis.

Lecturer: R. J. Kavanagh, Ph.D.

Time: Mondays at 7:30, beginning October 6th.

Place: Room E 23 Electrical Building

Fee: $50.00

ELECTRIC POWER SYSTEMS

MONDAYS 25 LECTURES

This course covers the principal methods of analysis used in solving problems in electric transmission and distribution systems. The major emphasis is placed on power flow, voltage control, short circuit and stability problems.

Equivalent circuits are developed for the representation of transmission lines, transformers, generators, motors and loads. Methods of analysis of equivalent networks include the use of symmetrical components, systems of equations, network reduction and the use of analysers and computers.

The methods of analysis are applied to typical problems of power flow, unbalanced faults, steady-state and transient stability.

Lecturers: J. G. Cassan, B.A.Sc.,
K. R. McClymont, B.A.Sc.

Time: Mondays at 7:30, beginning October 6th

Place: Room E 34 Electrical Building

Fee: $50.00